Returns of Tagged Pen-Reared Green Turtles

Ross Witham and Archie Carr

One of the unsolved puzzles in the natural history of sea turtles is the disappearance of the young during the year after hatching. This gap not only hinders studies of the life cycle of the species but also prevents evaluation of the success of restoration projects involving the transplantation of young turtles and the reduction of predation upon the early stages. Hatchling predators are of two kinds: those that attack the eggs and young on shore and those that intercept the hatchlings after they enter the sea. The former can be circumvented by fencing or careful policing of sites of heavy nesting, or by moving eggs to protected hatcheries. For some time it has seemed possible that survival might be further augmented by rearing the young turtles to sizes at which such smaller predators as gulls, robalo, and jackfish would be unable to plague them in the water. At the same time, however, it has appeared possible that this move might actually decrease survival by blocking normal behavioral and ecologic development and making the young turtle unfit to go through its regular life cycle. Within recent months a few data suggesting that this is not true have accumulated. Two relevant cases are reported below.

Ninety-eight green turtles sent to Florida from the hatchery of the Caribbean Conservation Corporation at Tortuguero, Costa Rica were kept for one year in concrete tanks at the House of Refuge Museum at Stuart. These were released into the Indian River on November 10, 1964. Each was tagged with a Monel poultry-wing tag, fastened to the back edge of the right front flipper near the body. Two of these turtles have now been recovered. The first was caught by Mr. Jack A. Scammell on January 15, 1965, after 64 days of freedom, in the Indian River about seven miles north of the release point. Size and weight were not determined.

The second turtle was recovered by Mr. Vincent Russell off Sandy Cay, Grand Bahama Island, on May 13, 1967, after having been at large for 30 months. It had traveled at least 65 nautical miles, and had crossed the Gulf Stream. It weighed 14 pounds (6350 grams) when retaken; the length was not reported. At the time this turtle was released the carapace length was 187 mm,

and although it was not weighed, two other turtles with carapace lengths of 184 mm, released at the same time, weighed 810 and 850 grams (1.78 and 1.87 pounds). Thus, weight-gain in the recaptured turtle during the 30 months of free life was about 12 pounds (5500 grams).

As improved tagging techniques are developed more yearlings will be tagged and released, in the hope of substantiating this bit of evidence that pen-reared turtles may be able to adapt to the normal ecologic regimen of the species.

Research and restoration work was supported by the National Science Foundation, the Office of Naval Research, and the Caribbean Conservation Corporation.

Florida Board of Conservation Marine Laboratory, St. Petersburg, Florida; Department of Zoology, University of Florida, Gainesville, Florida 32601.